DOCKETED

Docket Number:	17-BSTD-01
Project Title:	2019 Building Energy Efficiency Standards PreRulemaking
TN #:	220091
Document Title:	Comments re Exhaust Energy Recovery Requirements
Description:	Suggestion for tighter requirements.
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Organization:	Ventacity Systems
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July 6, 2017

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 17-BTSD-01
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 17-BTSD-01 – Non-Residential HVAC Measures for 2019 Standards

Dear Mr. Alatorre:

Please consider the following comments:

1. Code Requirements Do Not Reflect State of the Art in Energy Recovery Systems

Given California's tendency to "push the envelope" when it comes to renewable energy, automobile gas mileage requirements, Zero Net Energy for residential and commercial buildings, carbon reduction, etc., it seems surprising that the proposed energy code to take effect in 2020 does not even rely on today's state-of-the-art HVAC technology, much less on what technologies will be readily available in 2020.

The Energy Analysis for Exhaust Air Energy Recovery (EAER) uses a 60% efficiency assumption for recovery performance when systems are available today that have been Passive House certified with efficiencies greater than 80%. The Analysis further burdens the Energy Savings analysis with fan performance assumptions that are not reflective of newer systems.

If state-of-the-art assumptions were used, the resulting analysis might indicate Savings/Cost ratios for EAER greater than 1 across many of California's climate zones.

2. The Proposed Tables (140.4-E-1 and E-2) for When Exhaust Air Energy Recovery is Required Do Not Reflect Achievable Energy Savings

Energy savings per system deployed are dependent on local climate conditions, set point settings, and the volume of outside air to be conditioned per unit of time. They are not directly dependent on whether or not a system operates for less or more than 8,000 hours per year. Nor are they dependent on the ratio of outside air to air volumes needed for heating and cooling. These tables should be collapsed with the only parameters being Climate Zone and the Cubic Feet of Outside Air Required per average day, with exceptions made for part-season usage such as found in most school systems.

Sincerely,

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